

It would seem from these results that the Nova brightened decidedly from February 1 to February 3, when it was at its maximum; and that after diminishing considerably in brightness it attained a secondary maximum about February 18, since which date it has become gradually fainter. Unfortunately, owing to cloudy weather, the record is very imperfect. It will be remarked that the Nova appears to be much brighter photographically than it is to the eye, judging from the visual estimations of magnitude which have been published.

Royal Observatory, Greenwich :
1892 March 11.

Preliminary Note on the Magnitude of the New Star in Auriga.

Communicated by Professor C. Pritchard, D.D., F.R.S.

Observations of the magnitude of the new star in *Auriga* have been made at this Observatory on all available occasions, and the results are here presented to the Society. The determinations of magnitude have been made to depend both on photometric measures with the wedge photometer and on photographs taken with the 13-inch photographic telescope.

The Nova has been compared with the following stars, whose magnitudes have been assumed from the *Uranometria Nova Oxoniensis* :

| | |
|---------------|-----------|
| χ Aurigæ | mag. 5.08 |
| ϕ Aurigæ | „ 5.44 |
| 26 Aurigæ | „ 5.63 |
| Lal. 10143 | „ 5.84 |

The results of the comparisons with the wedge photometer are shown in the following table :

| Date 1892. | Observed Photometric Magnitude. | Stars of Comparison. |
|------------|---------------------------------------|---------------------------------|
| Feb. 3 | 4.82 | χ Aurigæ. |
| 5 | 5.11 | χ , ϕ Aurigæ. |
| 7 | 4.96 | χ , ϕ , 26 Aurigæ. |
| 11 | 5.16 | ϕ , 26 Aurigæ. |
| 13 | 5.28 | ϕ , 26 Aurigæ. |
| 16 | 5.44 | χ , ϕ Aurigæ. |
| 18 | 5.60 | ϕ , 26 Aurigæ, Lal. 10143. |
| 22 | 5.51 | 26 Aurigæ, Lal. 10143. |
| 28 | 5.64 | ϕ , 26 Aurigæ. |
| Mar. 7 | 5.89 | Lal. 10143. |

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A series of photographs has likewise been taken of the Nova and of the neighbouring stars. The magnitude has been deduced, after measurement of the diameter of the photographic image, by means of a curve drawn in the manner suggested in the *Proceedings of the Royal Society*, May, 1886. This curve is based on the diameters of stars ranging from β *Tauri* (mag. 1.79) to *Piazzi* v. 62 (mag. 6.20).

Photographic Magnitude of Nova Auriga.

| Date 1892. | Photographic Magnitude. |
|------------|----------------------------|
| Feb. 11 | 5.09 |
| 13 | 5.35 |
| 16 | 5.39 |
| 18 | 5.70 |
| Mar. 7 | 5.82 |

P.S.—The following further determinations of the magnitude of the Nova have been made since the date of this paper :—

| | By Wedge Photometer. mag. | By Photographic Record. |
|--------|---------------------------------|----------------------------|
| Mar. 8 | 5.96 | |
| 12 | 6.93 | 7.13 |
| 13 | 7.07 | |
| 14 | 7.25 | |
| 18 | 8.76 | 8.93 |
| 19 | 9.10 | 9.26 |
| 22 | 9.32 | |

Oxford University Observatory:
1892 March 23.

The New Star in Auriga. By George Knott, B.A., LL.B.

The new star in *Auriga* was first seen here on the evening of February 3, when it appeared to be equal in magnitude to χ *Aurigæ*. As seen in the telescope its colour was yellowish. Viewed with a small direct-vision spectroscope, which fits over the field-lens of an ordinary negative eye-piece, mag. power 200, its spectrum was seen to be crossed by four broad bright lines in the green and blue. Lettering these in order from green to blue, *b* was in mid-distance between *a* and *d*, and *c* was at about one-third of the distance from *d* to *b*. The brightest of the four lines was *d* (solar F?), and *c* was the narrowest and faintest. On receiving, later in the evening, Dr. Copeland's Edinburgh Circular, I looked for other bright lines, and glimpsed one in the violet.

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